

# EXHIBIT L

**SUBJECT EXAMINATION PROGRAM****COMPREHENSIVE BASIC SCIENCE EXAMINATION****SCORE INTERPRETATION GUIDE**

NBME® subject examinations provide medical schools with a tool for measuring examinees' understanding of the basic sciences. Although these examinations are designed to be broadly appropriate as part of overall examinee assessment, course objectives vary across schools, and the congruence between subject examination content and course objectives should be considered when interpreting test scores and determining grading standards. Specifically, subject examination scores should not be used alone, but rather in conjunction with other indicators of examinee performance in determination of grades.

### CBSE Scores

Because the Comprehensive Basic Science Examination (CBSE) and the United States Medical Licensing Examination® (USMLE®) Step 1 cover very similar content, CBSE performance can be used in conjunction with other information to assess readiness for Step 1. The CBSE score represents an estimate of an examinee's performance on the USMLE® Step 1 if he/she had taken both exams under the same conditions and with the same level of knowledge. Estimated performance based on taking CBSE is not a guarantee of future performance on Step 1. Many factors, including changing levels of knowledge and testing conditions, may result in a Step 1 score that is higher or lower than the estimated score.

### Precision of Scores

Measurement error is present on all tests, and the standard error of estimate (SEE) provides an index of the (im)precision of scores. If an examinee tested repeatedly under the same conditions on a different set of items covering the same content, his/her CBSE score would fall within one SEE of the current score two-thirds of the time. The SEE on this exam is 8 points.

### Score and Performance Feedback

Summary information on the examinee group tested, examination purpose and number of items scored is provided on each page of the feedback. The [\*Roster of CBSE Scores\*](#) reports a total test score for each examinee. Reported scores also appear in a comma separated text file that can be downloaded. An [\*Examinee Performance Profile\*](#), which graphically displays content areas of strength and weakness, is provided for each examinee.

If there were at least 2 examinees, [\*CBSE Score Descriptive Statistics\*](#) for reported scores are provided along with a [\*Frequency Distribution\*](#) of the total test score. If there were at least 5 examinees for a single form administration, a detailed [\*Content Area Item Analysis Report\*](#) summarizing the general content of each item on the exam along with group item performance is provided. Content area item descriptors and group item performance also appear in a file that can be downloaded. If there were at least 5 examinees for a single form administration or 10 examinees for a multiple form administration, a [\*Summary Content Area Item Analysis Report\*](#) is provided.

If there were at least 15 examinees, a [\*School Summary Performance Profile\*](#), which graphically displays areas of strength and weakness in each major content area for your specific test administration, is provided.

### Norms

Total academic year norms are provided for two relevant national groups to aid in the interpretation of examinee performance. The two most recent sets of norms that have been developed for this examination are provided for your convenience and are reported on the CBSE score scale. Norms can also be found on the [\*MyNBME Services Portal \(MyNBME\)\*](#).

**SUBJECT EXAMINATION PROGRAM****COMPREHENSIVE BASIC SCIENCE EXAMINATION****2020-2021 ACADEMIC YEAR NORMS****Interpreting Academic Norms**

- Norms are provided to aid in the interpretation of examinee performance.
- They make it possible to compare examinees' scores with the performance of a norm group.
- Norm group characteristics:
  - Group 1: Examinees from LCME-accredited medical schools who took a form of this examination with a test purpose code of 'end-of-course', 'end-of-year', or 'other' for the first time during the academic year from 7/1/2020 through 6/30/2021.
  - Group 2: Examinees from LCME-accredited medical schools with a graduation year of 2023 who took a form of this examination during the academic year from 7/1/2020 through 6/30/2021. If an examinee took CBSE multiple times for progress testing or other purposes, only the final attempt in the current academic year is included.
- Group 1 is the norm group that has previously been reported for CBSE. Group 2 is an alternative norm group that provides a comparison to examinees' final CBSE attempt during their second year of medical school. There is substantial overlap between Group 1 and Group 2, but Group 2 also includes examinees from medical schools that administer CBSE multiple times; examinees from these schools are excluded from Group 1.

CBSE Score	Group 1 Percentile	Group 2 Percentile	CBSE Score	Group 1 Percentile	Group 2 Percentile
	Ranks	Ranks		Ranks	Ranks
252 and above	99	98	184	49	32
250	98	97	182	47	30
248	98	97	180	44	27
246	97	96	178	42	25
244	97	95	176	40	24
242	96	94	174	38	21
240	95	93	172	35	19
238	95	92	170	33	18
236	94	91	168	31	16
234	93	89	166	29	14
232	92	88	164	27	13
230	91	86	162	24	11
228	90	85	160	22	10
226	89	83	158	20	8
224	87	81	156	18	7
222	86	79	154	16	6
220	85	77	152	14	5
218	83	75	150	12	5
216	81	73	148	11	4
214	80	71	146	10	3
212	78	68	144	8	3
210	76	66	142	7	2
208	74	63	140	6	2
206	72	60	138	5	1
204	70	57	136	4	1
202	68	55	134	3	1
200	66	52	132	3	1
198	64	49	130	2	1
196	62	47	128	2	1
194	61	44	126	1	0
192	58	42	124	1	0
190	56	40	122	1	0
188	54	37	120	1	0
186	52	34	118 and below	1	0

Norm Group	Number of Schools	Number of Examinees	Mean	SD
Group 1	73	9,784	186.6	30.9
Group 2	94	11,570	198.2	28.4

**Using the Table**

- Locate an examinee's score in the column labeled "CBSE Score" and note the entry in the adjacent column labeled "Percentile Ranks" for the examinee group of interest. This number indicates the percentage of examinees that scored at or below the examinee's CBSE score.

**SUBJECT EXAMINATION PROGRAM****COMPREHENSIVE BASIC SCIENCE EXAMINATION****2020-2021 ACADEMIC YEAR NORMS – YEAR 1 EXAMINEES****Interpreting Academic Norms**

- Norms are provided to aid in the interpretation of examinee performance.
- They make it possible to compare examinees' scores with the performance of a norm group.
- Norm group characteristics:
  - Examinees from LCME-accredited medical schools with a graduation year of 2024 who took a form of this examination during the academic year from 7/1/2020 through 6/30/2021. If an examinee took CBSE multiple times for progress testing or other purposes during the first year of medical school, only the final attempt in the current academic year is included.

Academic Years	Number of Schools	Number of Examinees	Mean	SD
2020-2021	24	2,616	158.8	20.5

**Using the Table**

- To use the table, locate an examinee's score in the column labeled "CBSE Score" and note the entry in the adjacent column labeled "Percentile Ranks." This number indicates the percentage of examinees that scored at or below the examinee's CBSE score.

Percentile		Percentile	
CBSE Score	Ranks	CBSE Score	Ranks
240 and above	100	164	64
238	100	162	59
236	100	160	54
234	100	158	49
232	100	156	45
230	100	154	41
228	100	152	37
226	100	150	33
224	100	148	30
222	99	146	26
220	99	144	22
218	99	142	19
216	99	140	17
214	99	138	15
212	99	136	13
210	99	134	11
208	99	132	9
206	98	130	7
204	98	128	6
202	98	126	6
200	98	124	5
198	97	122	4
196	96	120	3
194	96	118	3
192	95	116	2
190	94	114	2
188	92	112	1
186	91	110	1
184	90	108	1
182	89	106	0
180	87	104	0
178	84	102	0
176	83	100	0
174	80	98	0
172	77	96	0
170	74	94	0
168	71	92	0
166	68	90 and below	0

**SUBJECT EXAMINATION PROGRAM****COMPREHENSIVE BASIC SCIENCE EXAMINATION****2019-2020 ACADEMIC YEAR NORMS****Interpreting Academic Norms**

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- Norm group characteristics:
  - Group 1: Examinees from LCME-accredited medical schools who took a form of this examination with a test purpose code of 'end-of-course', 'end-of-year', or 'other' for the first time during the academic year from 7/1/2019 through 6/30/2020.
  - Group 2: Examinees from LCME-accredited medical schools with a graduation year of 2022 who took a form of this examination during the academic year from 7/1/2019 through 6/30/2020. If an examinee took CBSE multiple times for progress testing or other purposes, only the final attempt in the current academic year is included.
- Group 1 is the norm group that has previously been reported for CBSE. Group 2 is an alternative norm group that provides a comparison to examinees' final CBSE attempt during their second year of medical school. There is substantial overlap between Group 1 and Group 2, but Group 2 also includes examinees from medical schools that administer CBSE multiple times; examinees from these schools are excluded from Group 1.

Norm Group	Number of Schools	Number of Examinees	Mean	SD
Group 1	67	7,837	185.8	30.2
Group 2	101	11,628	193.4	28.1

CBSE Score	Group 1 Percentile Ranks	Group 2 Percentile Ranks	CBSE Score	Group 1 Percentile Ranks	Group 2 Percentile Ranks
252 and above	99	99	184	49	39
250	99	98	182	47	36
248	98	98	180	44	34
246	98	98	178	42	32
244	98	97	176	40	29
242	97	96	174	37	27
240	96	95	172	35	25
238	96	94	170	33	23
236	95	93	168	31	21
234	94	92	166	28	19
232	93	91	164	26	16
230	92	90	162	24	15
228	91	88	160	22	13
226	90	87	158	20	12
224	89	85	156	18	10
222	87	83	154	17	8
220	86	82	152	15	7
218	84	80	150	13	6
216	83	78	148	12	5
214	81	76	146	10	4
212	79	73	144	9	4
210	78	72	142	8	3
208	76	69	140	7	2
206	74	66	138	6	2
204	72	64	136	5	2
202	70	62	134	4	1
200	68	60	132	3	1
198	66	57	130	3	1
196	64	54	128	2	0
194	61	52	126	1	0
192	59	49	124	1	0
190	57	47	122	1	0
188	54	44	120	0	0
186	52	42	118 and below	0	0

**Using the Table**

- Locate an examinee's score in the column labeled "CBSE Score" and note the entry in the adjacent column labeled "Percentile Ranks" for the examinee group of interest. This number indicates the percentage of examinees that scored at or below the examinee's CBSE score.

**SUBJECT EXAMINATION PROGRAM****COMPREHENSIVE BASIC SCIENCE EXAMINATION****2019-2020 ACADEMIC YEAR NORMS – YEAR 1 EXAMINEES****Interpreting Academic Norms**

- Norms are provided to aid in the interpretation of examinee performance.
- They make it possible to compare examinees' scores with the performance of a norm group.
- Norm group characteristics:
  - Examinees from LCME-accredited medical schools with a graduation year of 2023 who took a form of this examination during the academic year from 7/1/2019 through 6/30/2020. If an examinee took CBSE multiple times for progress testing or other purposes during the first year of medical school, only the final attempt in the current academic year is included.

Academic Years	Number of Schools	Number of Examinees	Mean	SD
2019-2020	22	1,772	146.9	24.4

**Using the Table**

- To use the table, locate an examinee's score in the column labeled "CBSE Score" and note the entry in the adjacent column labeled "Percentile Ranks." This number indicates the percentage of examinees that scored at or below the examinee's CBSE score.

Percentile		Percentile	
CBSE Score	Ranks	CBSE Score	Ranks
240 and above	100	164	80
238	100	162	79
236	100	160	77
234	100	158	74
232	99	156	71
230	99	154	68
228	99	152	65
226	99	150	61
224	99	148	58
222	99	146	54
220	99	144	50
218	99	142	45
216	98	140	42
214	98	138	38
212	98	136	35
210	98	134	32
208	98	132	29
206	98	130	26
204	98	128	22
202	97	126	19
200	97	124	15
198	97	122	14
196	96	120	11
194	96	118	9
192	96	116	8
190	95	114	7
188	94	112	5
186	94	110	4
184	93	108	4
182	92	106	3
180	91	104	2
178	90	102	1
176	89	100	1
174	88	98	1
172	86	96	0
170	85	94	0
168	83	92	0
166	82	90 and below	0

# SUBJECT EXAMINATION PROGRAM

## COMPREHENSIVE BASIC SCIENCE EXAMINATION

### ROSTER REPORT



**665060 - Caribbean Medical University School of M**

**Reporting Group: Medical Students**

**Test Purpose: During Instruction/Training**

**N Scored Items: 195**

**Test Date(s): 02/11/2022**

**Order ID: D16484**

**N Examinees: 1**

#### Roster of CBSE Scores

The roster of scores contains score(s) for each examinee who tested on the specified test date(s). These same scores also appear in a comma separated value text file that can be downloaded and used to export scores into your local database. Please refer to the Score Interpretation Guide for information about how to interpret the scores.

ID	Name	Total
2138	Zangara Jason Andrew	174